REMARKS

Claims 1-20 and 22-42 are currently pending. Claims 29-35 have been amended for clarification only. It is respectfully submitted that no new matter has been added.

Claims 1, 2, 4-6, 10-12, 14, 15, 19, 29, 30, and 35-37 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Stephenson, U.S. Patent No. 6,119,000, in view of Kauppi, U.S. Patent No. 5,832,381.

Independent claim 1 recites, in pertinent part, as follows:

> A mobile station executed method for changing from a current cell to a new cell in a wireless packet data network, comprising: ... **buffering the cell change PDU message into a PDU transmit queue before any buffered PDUs that were present before the mobile station entered the new cell**...

Independent claim 11 recites, in pertinent part, as follows:

> A mobile station comprising a packet data buffer and a controller ... for **buffering the cell change PDU message into the packet data buffer such that it is selected for transmission prior to any buffered PDUs that were present before the mobile station entered the new cell**...

Independent claim 29 recites, in pertinent part, as follows:

> A computer program embodied in a computer readable medium the execution of which in association with a device cell change operation performs operations of: ... **buffering the cell change PDU message into a PDU transmit queue such that it is transmitted to the network before any already buffered PDUs.**

Independent claim 36 recites, in pertinent part, as follows:

> A device, comprising: ... means for **buffering the cell change PDU message into a PDU transmit queue such that it is transmitted to the wireless network before any already buffered PDUs.**

Stephenson does not teach buffering the cell change PDU message into a PDU transmit queue before any buffered PDUs that were present before the mobile station entered the new cell.

Stephenson (column 15, lines 1-29) discloses

> First Embodiment--Dealing With Handovers In the foregoing, it has been assumed that each transaction only involves one SCCP connection--in practice, as a subscriber moves, the mobile station may pass from one cell to another and this may result in a change in BSC which, of course, involves the original SCCP connection being taken down and a new one established. Whilst there are well known handover procedures for coping with changes in cell during the course of a communication session, changes in SCCP connection can impact the tracking method described above. More particularly, it is quite likely that no messages will appear on the new SCCP connection to give the operative identity code whereas **a TMSI reallocation message could be issued changing the operative identity code**; in such a situation, the tracking method described above would be inadequate. What is required is some way of **linking the old and new SCCP connections so that the operative identity code known for the old SCCP connection can be transferred** across into the record established for the new connection. **To achieve this, the monitor probes 40 are arranged to monitor hand-over related signalling on the A interfaces, so as to collect common parameters that appear on both an old SCCP connection about to be taken down in respect of a communication session and on a new SCCP connection established to take over a communication session; the values of these common parameters are then compared to match up old and new SCCP connections related to the same communication session.**

Stephenson discloses monitor probes 40A and 40Z that extract subscriber identity information from the messages transmitted between base station controller and the mobile switching center (column 12, lines 46-51; Figure 10). The monitor probes collect information regarding Signalling Connection Control Part (SCCP) connections to link old and new SCCP connections to facilitate transferring the operative identity code. Stephenson does not teach buffering the cell change PDU message into a PDU transmit queue before any buffered PDUs that were present before the mobile station entered the new cell. There is no suggestion of

prioritizing PDU messages to permit a cell change PDU message to be transmitted ahead of previously stored PDU messages. Thus, claims 1, 29, and 36 are not anticipated by Stephenson.

Stephenson describes conventional cellular network behavior. For example, col. 7, lines 33-45, state simply that:

"Upon detecting a location area change, the mobile station transmits a "location update request" which is received by the BTS of the cell in which the mobile station is currently to be found. This request is then passed via the BSC associated with the BTS, back to the relevant MSC. The MSC then updates the location information held for the mobile station in the VLR associated with the MSC. In the event that a mobile station moves from a location area covered by one MSC to a location area covered by another MSC, a changeover process is effected between MSCs which also involves the HLR being updated with the address of the MSC into whose area the mobile station has now moved."

Stephenson (column 6, lines 26-33) discloses

> mobility management--this is the task of maintaining up-to-date user location information so as to permit incoming calls to be routed to the appropriate mobile station; **in GSM, the address of the MSC in the area of which a user is to be found, is stored in the user's HLR whilst the user's location within that area is held in the VLR associated with the MSC.** This management function involves the MSCs/VLRs and the HLR.

Those portions cited by the Patent Office, that appear to be concerned with what appears to be conventional MSC/HLR/VLR behavior and operation, do not suggest or render obvious the subject matter of claims 1 or 11. Stephenson (column 6, lines 26-33) also fails to teach buffering the cell change PDU message into a PDU transmit queue before any buffered PDUs that were present before the mobile station entered the new cell. The arguments made with regard to claims 1 and 11 are applicable as well to claims 29 and 36 since these claims each recites "**buffering the cell change PDU message into the packet data buffer**" before any buffered PDUs that were present or before any already buffered PDUs.

Kauppi discloses a location area level selection mechanism in which the determination of the location area level by the mobile station is based on the current mobility of the mobile station and on the amount of signaling relating to location

updating caused by staying at each location area level. The Patent Office has cited column 6, line 61, through column 8, line 14) of Kauppi as teaching "**buffering the cell change PDU message into a PDU transmit queue before any buffered PDUs that were present before the mobile station entered the new cell.**" The cited passage of Kauppi discloses that a mobile station uses a timer to determine a location area level where the mobile station will transmit a location updating request (column 7, lines 28-37). In this cited passage, Kauppi does not disclose buffering or a transmit queue and certainly does not disclose "**buffering the cell change PDU message into a PDU transmit queue before any buffered PDUs that were present before the mobile station entered the new cell.**"

Thus, claims 1, 2, 4-6, 10-12, 14, 15, 19, 29, 30, and 35-37 are not made obvious by Stephenson in view of Kauppi.

The Patent Office rejected claims 3, 13, 20, 21, 24-28, 31, 38, and 42 under 35 U.S.C. 103(a) as being unpatentable over Stephenson, U.S. Patent No. 6,119,000, in view of Kauppi, U.S. Patent No. 5,832,381, and further in view of Lohtia, U.S. Published Patent Application No. 2002/0082033.

Independent claim 27 recites

> A method for organizing packet data units (PDUs) into a transmit queue, comprising: passing a PDU to a Radio Link Control (RLC) unit, the PDU having a flag for indicating a priority of the PDU relative to other PDUs; storing the PDU into the transmit queue in accordance with the indicated priority; and transmitting the stored PDU to a radio channel before any stored PDUs having a lower priority.

As discussed above, Stephenson in view of Kauppi does not teach buffering the cell change PDU message into a PDU transmit queue before any buffered PDUs that were present before the mobile station entered the new cell.

Lohtia discloses a procedure by which a base station initiates a downlink temporary block flow (TBF) in which the base station sends a packet paging request (paragraph 0054). Lohtia also discloses that a TBF may be assigned for communication with another mobile station when

the TBF is released (paragraph 0034) and Lohtia discloses establishing a connection over a wireless link between a mobile station and a radio access network system in which the connection is release after a predetermined time delay period after the end of the mobile station's data transmission (claim 1). Like Stephenson, Lohtia does not disclose does not teach buffering the cell change PDU message into a PDU transmit queue before any buffered PDUs that were present before the mobile station entered the new cell.

Thus, claim 27 is allowable over the prior art of record.

Furthermore, because Lohtia does not cure the discussed deficiency of Stephenson in view of Kauppi, claims 3, 13, 27, 28, 31, 38, and 42 are allowable over the prior art of record.

Independent claim 20 recites

> A method for informing a Serving General Packet Radio Service (GPRS) Support Node (SGSN) of a wireless network that a Mobile Station (MS) has made a cell change, comprising: changing from a first cell to a second cell with the MS; and prior to the SGSN receiving at least one of a Packet Data Unit (PDU) and a message from the MS, notifying the SGSN of the MS cell change.

The Patent Office (page 7, lines 9-12, of the Office Action dated September 07, 2006:

> Lohtia et al. teach a GPRS based uplink/downlink packet radio communication method including MS and SGSN both with LLC, RLC/MAC layer functions wherein SGSN manages communication in the coverage area for the MS's cell change (See Fig. 1, page 2, paragraph [0020]).

Lohtia (paragraph 0020) recites:

> The base station system 14 is coupled to a serving GPRS support node (SGSN) 20 over a Gb interface, which is in turn coupled to a gateway GPRS support node (GGSN) 22. Generally, the SGSN 20 manages communications with mobile stations within its coverage area as well as the detection of new mobile stations that have entered the coverage area.

> The GGSN 22 is an interface node to an external packet data network 24, such as an intranet or the Internet. In one embodiment, communications over the data network 24 is according to an Internet Protocol (IP). One version of IP is described in Request for Comments (RFC) 791, entitled "Internet Protocol," dated September 1981; and another version of IP is described in RFC 2460, entitled "Internet Protocol, Version 6 (IPy6) Specification," dated December 1998.

Although Lohtia does disclose the SGSN manages communications with mobile stations within its coverage area as well as the detection of new mobile stations that have entered the coverage area, Lohtia does not disclose "prior to the SGSN receiving at least one of a Packet Data Unit (PDU) and a message from the MS, notifying the SGSN of the MS cell change." Neither Stephenson nor Kauppi disclose this subject matter.

Thus, claim 20 is allowable over the prior art of record.

Dependent claim 28 further modifies claim 27 by stating that the "RLC unit is associated with a mobile station, where the PDU is a cell change PDU, and where the cell change PDU is assigned a highest priority." The claimed subject matter is clearly not found in either Stephenson or in Lohtia et al., and is thus also clearly allowable over these two references alone or in combination.

Claims 3, 13, 31 and 38 are allowable because they depend from allowable base claims.

Furthermore, when rejecting claims 5 and 14 the Patent Office refers to col. 17, lines 21-30, of Stephenson. The rejection is not understood, as for example claim 5 recites the method as in claim 1:

"wherein the generated cell change PDU is transmitted only if a first PDU in the transmit queue exceeds a predetermined length, otherwise the cell change PDU is discarded and the first PDU in the transmit queue is transmitted instead",

whereas the cited portion of Stephenson states:

"when a Handover Complete message 75 is detected by monitor 40Z, it checks whether the connection record identified by the appropriate SCCP local reference of the message 75 has associated old CellID and RR3 Handover Command parameter values--if these parameter values are present, the monitor 40Z sends a Correlation New message 81 to the central station 42

including the monitor ID, the old CellID, the parameter values of the RR3 Handover Command, and the SCCP local reference used to identify the connection record."

What relevance this passage from Stephenson has to claims 5 and 14 is not understood, and further clarification is requested. **The original request for clarification was made in the response filed December 14, 2006, and has yet to receive a response from the Patent Office.**

Furthermore, the rejection of claims 6 and 15 is also not understood. The Patent Office states that Stephenson teaches a GPRS network. However, and as was noted, the word "packet" does not appear in Stephenson, and neither does "GPRS". Col. 10, line 61 to col. 11, line 7, does not appear to be relevant, and in fact it appears to be related to messaging between the Base Station Controller (BSC) and the Mobile Switching Center (MSC). **This observation by Applicant was provided in the response filed December 14, 2006, but remains unaddressed by the Patent Office.**

The foregoing specific references are not to be construed as being exhaustive of all of the rejections made by the Patent Office with which the applicant is in disagreement.

The Patent Office is respectfully requested to reconsider and remove the rejection of claims 1-20 and 22-42 under 35 USC 103(a), and to allow all of the pending claims 1-20 and 22-42 as now presented for examination. An early notification of the allowability of claims 1-20 and 22-42 is earnestly solicited.

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